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New species of fungi

CORNELIUS LOTT SHEAR

The following fungi appear to be undescribed. Most of them have been discovered during our studies of the fungous diseases of the cranberry. Type specimens of all are deposited in the pathological collections of the Department of Agriculture.

Ozonium omnivorum sp. nov.

No fructification definitely known. Sterile mycelium usually a dirty yellow, sometimes whitish when young or growing in cultures or in the vessels of vascular bundles of plants; hyphae forming strands and spreading from them, producing a rather dense arachnoid layer on the surface of the host and bearing 1 to 4 branches arising and growing at right angles from the same point near the ends, diameter 3–5 μ, tapering toward the ends.

Type, *no. 1447* C. L. S., on cotton root, Petty, Texas, Sept. 2, 1905. The fungus occurs from eastern Texas to southern California and has also been found in southern Oklahoma and Indian Territory. This fungus is a facultative parasite infesting the soil and attacking the roots of a great variety of plants and causing serious damage to cultivated crops, such as cotton, alfalfa, cowpeas, sweet potatoes, beets, and fruit trees. Few crops except grasses and grains are free from it. The fungus was described and figured by Pammel * who called it *Ozonium auricomum* Link. Having had an opportunity to examine Link's type at Berlin, we are convinced that this fungus is quite different from his. *O. auricomum* Link is somewhat similar in color but has a much coarser and looser mycelium, and lacks entirely the slender tapering branches arising at right angles which are so characteristic of *O. omnivorum*. *O. auricomum* occurs in Texas, but so far as observed only as a pure saprophyte. Owing to the important economic relations of this root-rot fungus, it seems desirable to give it a specific name, even though its fruiting form is not known. We

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*Ann. Rep. Texas Agr. Exp. Sta. **2**: 61 et seq., *pl. 2, 3.* 1889.

have grown it in pure cultures on various media for several years, but it never produced spores of any kind.

Sporotrichum Quercuum sp. nov.

Sporotrichum sulfureum Grev. f. *Quercuum* Thüm. Mycotheca Universalis Exs. *no. 986*, without description.

Cespitulose, tufts subglobose, somewhat floccose, gregarious or scattered, 0.12–1 mm. in diam., sulphur-colored at first, becoming greenish as spores mature; each tuft is composed of small rounded masses of fertile hyphae bearing conidia; these masses are held together rather loosely by yellowish, branched, sterile hyphae; conidia greenish in mass, subglobose, 1.5–2μ diam., borne at the ends of densely packed globose masses of conidiophores, the ultimate divisions of which are about 6μ long.

Type, *no. 986* Thümen Myc. Univ., Dept. Agriculture set, on decaying oak leaf, collected by J. B. Ellis, in New Jersey presumably, summer of 1876. The species is common about Washington in the summer and autumn on partially buried oak leaves of various species and occasionally on leaves of other trees. It is also represented by *no. 1478* C.L.S., on buried leaves of *Quercus coccinea* and *Castanea dentata*, Takoma Park, Maryland, September 24, 1906.

The plant has a very characteristic macroscopic appearance. The groups of yellowish or greenish, globose masses when examined with a hand lens can be seen to consist of a cluster of smaller spore-masses, rather loosely held together by the floccose sterile hyphae. The larger hyphae at the base and interior of the mass are minutely roughened. Whether conidia are borne on these or not could not be determined. Judging from Greville's figure (Scot. Crypt. Fl. *pl. 108. f. 2*) our plant is not very closely related to his *S. sulphureum.*

Cladosporium Oxycocci sp. nov.

Sporophores hypophyllous, simple, septate, flexuous, yellowish-brown, erect or spreading, arranged in small tufts which arise from a small, compact, sclerotoid base and are scattered over the surface of reddish-brown spots which frequently become light-colored at the center when old, 50–100μ long; conidia acrogenous, yellowish-brown, 1–3 on each sporophore, subcylindrical or somewhat clavate when mature, continuous or uniseptate, 15–24 × 3–4μ.

Type, *no. 1492* C.L.S., on living leaves of *Vaccinium macrocarpum*, Arichat, Nova Scotia, June 21, 1902; also collected at Belleplain and Parkdale, N. J.; and near Wareham, Mass., June 7, 1906, H. J. Franklin.

Helminthosporium inaequale sp. nov.

Sterile hyphae effuse, decumbent, much branched, dark-brown, sometimes forming compact strands of 3–12 filaments. Fertile hyphae ascending or suberect, septate, very variable in length, 6–8μ diam., bearing both terminal and lateral conidia; conidia inequilateral or curved, 3–5-celled and thick-walled, brown, 22–32 × 11–14μ, central cell usually larger than the others and swollen. Erect, slender, somewhat branching, hard, black, sclerotoid bodies are formed in abundance in old cultures. These when transplanted will produce conidia, but no other form of fructification has occurred.

Type, slide *no. 1498* from pure culture *no. 457b* isolated from pulp of diseased cranberries from New Jersey, November, 1905. This fungus has only been obtained in cultures.

Phyllosticta putrefaciens sp. nov.

Pycnidia gregarious, buried or subsuperficial, globose or subglobose, membranous, dark-brown or nearly black, ostiolate, 75–100μ diam.; ostiole conspicuous, surrounded by a slightly elevated, somewhat irregular margin; spores variable in shape, ovoid or ovoid-elliptic, sometimes inequilateral or slightly curved, continuous, hyaline or faintly yellowish in mass, 3.5–5 × 2.5–3μ; sporophores simple, very short.

Type, slide *no. 1496* from pure culture *no. 312*, isolated from a diseased cranberry from Whitesville, New Jersey, September, 1905, C. L. S. *No. 1497* C. L. S., collected on cranberries which had been attacked by the berry worm at Wareham, Massachusetts, September 23, 1902, resembles this species rather closely and may be the same. The pycnidia in these specimens are not so well developed and the ostiole not so distinct as in the type, while the spores are slightly longer, varying from 4.5–6.5 × 3μ. Specimens have also been collected on old cranberry leaves (*no. 1503* C. L. S., Pierceville, Mass., May 21, 1907), which belong to this species.

Sphaeronema pomorum sp. nov.

Pycnidia gregarious or scattered, subsuperficial, submembranous, subglobose, 125–175μ diam. with an ostiolate neck 75–150μ long; spores oblong-cylindric or frequently ovoid or subelliptic, continuous, pale greenish yellow, 6–7 × 3μ.

Type, slide *no. 1495* C. L. S., from pure culture *no. 141b*. This fungus was isolated from a diseased cranberry, *Vaccinium macrocarpum*, from near Whitesville, New Jersey, October, 1905.

Septoria longispora sp. nov.

Pycnidia gregarious or somewhat scattered, globose or depressed-globose, somewhat erumpent, covered by the epidermis, ostiolate, 150–225µ diam.; ostiole small; spores hyaline, filiform, curved, frequently S-shaped, sometimes pseudo-septate, 150–240 × 3–4µ, when straightened some are 300µ long; sporophores simple, narrow, 6–9µ long.

The length of the spores of this species is quite remarkable and separates it easily from the other species thus far described. It occurs on both fruit and foliage.

Type, *no. 1499* C. L. S., on shrivelled rotten cranberries, still hanging on the vines, Hunters Mills, New Jersey, October 14, 1902. Also on fallen cranberry leaves, *no. 1500* C. L. S., same locality, June 21, 1906.

Sporonema Oxycocci sp. nov.

Pycnidia excipuliform, thickened at the base, gradually disappearing above, arising beneath the epidermis and becoming erumpent, depressed-globose, gregarious or scattered, amphigenous, 50–100µ diam., sometimes collapsing, rupturing irregularly by a slit or triangular split; sporophores simple, oblong or subglobose, about one fourth the length of the spore or less; spores hyaline, cylindrical, straight, continuous, 17–19 × 3–4µ; contents homogeneous.

Type, *no. 1484* C. L. S. (on slide) on dead leaf of *Vaccinium macrocarpum*, near Wareham, Massachusetts, H. J. Franklin, coll., May, 1906; also *no. 1485* C. L. S., Cape Cod, Massachusetts, September, 1906; and *no. 1486* C. L. S., near Whitesville, N. J., September 2, 1904.

This bears a superficial resemblance to *Phoma leptidea* (Fr.) Sacc., but that has a complete pycnidium and a distinct, regular ostiole. It may be the pycnidial stage of a *Phacidium*.

Sporonema pulvinatum sp. nov.

Pycnidia either epiphyllous or hypophyllous, arising from the epidermis, dark-brown, pulvinate, frequently collapsing, 300–420µ diameter by 100–150µ thick, chamber simple; ostiole wanting; manner of rupturing not observed; spores inequilateral or slightly curved, continuous, 6–8 × 2–2.5µ, hyaline or slightly greenish-yellow in mass; sporophores simple, somewhat enlarged at the base, slightly longer than the mature spores.

Type, *no. 1480* C. L. S., on one year old leaves of *Vaccinium macrocarpum* received from Morgantown, West Virginia, June, 1902, and kept in a moist chamber about two weeks. Specimens also from near Whitesville, New Jersey, *no. 1481*, November, 1905, and *no. 1482*, from Olympia, Washington, September, 1906.

Our plant, externally, closely resembles *Sporonema epiphyllum* (Fr.) Shear. A study of the literature relating to this species, as well as a careful examination of the specimens in Fries' herbarium leads us to believe that it is distinct from the plant just described. The pycnidia in our species are larger and the spores appear to be constantly smaller, less curved and without indication of a pseudoseptum. It bears a superficial resemblance to young specimens of *Lophodermium melaleucum* (Fr.) DeNot. and it may be the pycnidial stage of this or of *Lophodermium Oxycocci* (Fr.) Karst.

Sporonema epiphyllum (Fr.) Shear

Sphaeria obturata var. b. *epiphyllum* Fr. Syst. Myc. **2**: 495. 1822; Scler. Suec. Exs. *128*.
S. (*Sphaeropsis*) *obtusata* (Typ. error) Curr. Simp. Sphaer. 329.
S. (*Sphaeropsis*) *obturata* Curr. Supp. Obs. Sphaer. 258.
Sporonema obturatum var. *epiphyllum* (Fr.) Sacc. Syll. Fung. **3**: 678. 1884.
Clinterium obturatum Fr. Summ. Veg. Scand. 418. 1849.
Clinterium obturatum Starbäck, Sphaer. Imp. Cog. 57. *pl. 3. f. 36a, b.* 1894.

The type of Fries' variety was his *Scleromyces Suecica no. 128*. The spores of this were first described by Curry (*l. c.*); later Starbäck (*l. c.*) described and figured the plant. What Fries species, *Sphaeria obturata*, is, does not seem to be definitely known. It appears from his treatment of it in Summ. Veg. Scand. that he regarded the variety as distinct, since he used the specific name under two genera. Under his new genus, *Clinterium* (*l. c.*, 418) he placed "*C. obturatum*," citing the specimen *no. 128* of his Scler. Suec., which represents his variety *epiphyllum*, and also Syst. Myc. **2**: 495, where his *Sphaeria obturata* and its varieties were first published. On page 402 of Summ. Veg. Scand., under the genus

Gibbera, he has "*G. obturata,*" citing the original description of *Sphaeria obturata,* as in the other case, but not the specimen. This seems to indicate that he regarded the variety not only as a separate species, but as belonging to a different genus. He used the same name in both cases, instead of taking up his varietal name, thinking, perhaps, that no confusion would arise from such duplicate use of the name when placed in different genera. The plant has been well described and figured by Starbäck (*l. c.*). There may be some doubt as to whether this plant is a true *Sporonema. Sporonema* was a monotypic genus founded by Desmazières in 1847 on *S. phacidioides.*

The genus *Clinterium* was described by Fries in 1849 and the type specified: "Typus *Sph. Sclerotium* Schwein. et al. Americ."

Until this species of Schweinitz is better known it will be impossible to say whether it is congeneric with Fries' plant or not, but, judging from the description, it is not, and hence this plant would necessarily be referred to some other genus.

PLAGIORHABDUS * gen. nov.

Pycnidia containing somewhat irregular chambers or cavities which usually unite and open through a rather large, distinct ostiole, usually covered by a thin, effuse, black, or coriaceous stroma consisting of the modified tissue of the host; spores hyaline, continuous, with the oblique sporophore remaining attached in the form of a basal appendage.

A genus of the order *Sphaeropsidales* of the imperfect fungi. The type of the genus is *P. Crataegi.*

Plagiorhabdus Crataegi sp. nov.

Stroma thin, black, effuse, formed beneath and within the epidermis, surface slightly rugose; pycnidia thick-walled, irregular in size and shape, embedded in the host and covered with the stromatic crust; interior divided into more or less irregular cavities which open through a rather large, central ostiole; spores hyaline, allantoid, usually biguttulate and provided with a slender oblique appendage near the basal end of the spore, consisting of the sporophore which is abstricted at its base and remains attached to the spore, which is 9–12 × 3–4 μ, appendage 12–20 × 1 μ.

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* Plagios = oblique, and rhabdos = rod, in allusion to the oblique appendage of the spores.

Type, *no. 1446* C. L. S., on old fruit of *Crataegus punctata* lying on the ground, Department of Agriculture grounds, Washington, D. C., December 20, 1902. The surface of the fruit is entirely covered with the thin black stroma.

Plagiorhabdus Oxycocci sp. nov.

Pycnidia scattered, mostly hypophyllous, irregularly depressed-globose, embedded in the tissue of the host, 125–190 μ diameter, usually very slightly erumpent with the upper portion mostly covered by a thin, dark, stromatic layer consisting of the modified epidermis; wall rather thin below and interior subsimple, or sometimes having a few irregular chambers uniting and opening through a single ostiole which is usually rather prominent; spores hyaline or faintly greenish-yellow in mass, slightly curved or allantoid, 8–10 × 3 μ, bearing a slender basal appendage consisting of the sporophore which is abstricted near its base; appendage 10–15 × 0.75 μ.

Type, *no. 1490* C. L. S., on leaves of dying cranberry plant, *Vaccinium macrocarpum*, Carver, Massachusetts, May, 1906, H. J. Franklin, coll. This species differs from *P. Crataegi* in its smaller, scattered, more simple pycnidia with thinner walls and poorly developed stromatic crust.

Leptothyrium Oxycocci sp. nov.

Pycnidia black, dimidiate, amphigenous, scattered, subcoriaceous, irregularly subglobose, 160–250 μ diameter, arising just beneath the epidermis, sometimes becoming superficial or subsuperficial and collapsing, rupturing irregularly and frequently breaking away about the base, exposing the spore-mass; wall somewhat irregular in thickness, especially at the apex, composed of parallel, elongate cells; spores subfusoid, hyaline, sometimes slightly curved, pseudoseptate, 10–15 × 2.5–3 μ, borne on simple, slightly tapering sporophores, slightly exceeding the length of the spores.

Type, *no. 1487* C. L. S., on dead leaves from diseased vines of *Vaccinium macrocarpum*, near Wareham, Massachusetts, May 22, 1906, H. J. Franklin, coll.; also from Pierceville, Massachusetts.

Rhabdospora Oxycocci sp. nov.

Pycnidia usually hypophyllous, scattered, buried, more or less irregularly depressed-globose, somewhat erumpent, greatest diameter 150–225 μ; ostiole small, plane, perforate; wall submembranous, consisting of two layers, the inner sometimes separated from the outer, except about the ostiole, and collapsing; the epidermal cells of the host overlying the pycnidia usually blackened; sporophores branched; spores hyaline, long fusiform, slightly curved, with 1–3 septa or pseudosepta, 20–26 × 2–3 μ.

Type, *no. 1479* C.L.S., on old leaves of *Vaccinium macrocarpum* lying on the ground under a pile of old vines which had been cut from an adjacent bog, near Whitesville, New Jersey, September 2, 1904.

Ceuthospora (?) lunata sp. nov.

Pycnidia scattered, amphigenous, disciform, subpulvinate, buried, slightly erumpent, remaining covered, 200 to 375 μ greatest diam., subcoriaceous, thick-walled, interior usually divided into irregular, incomplete chambers, opening through a rather prominent, slightly projecting ostiole; sporophores somewhat branched, ultimate divisions stout, shorter than the spores; spores subhyaline or slightly greenish-yellow in mass, inequilateral or somewhat lunate, 7–9 × 3–3.5 μ.

Type, *no. 1488* C.L.S., on fallen leaves from vines of *Vaccinium macrocarpum* which had been cut and piled on the margin of a cranberry bog near Whitesville, New Jersey, September 2, 1904; also *no. 1489* C.L.S., on leaves of dead vines, Wareham, Massachusetts, September, 1902.

The spores of this plant can scarcely be distinguished from those of *Phoma cytisporea* (Fr.) Starb. (*Cytispora endophylla* (Fr.) Sacc.). A scanty specimen in Fries' herbarium which we have examined, differs from the type of our species in having thin-walled pycnidia, with a single, simple chamber. The Massachusetts specimens have somewhat smaller pycnidia than the type and fewer chambers. This plant is referred to *Ceuthospora* with doubt. It appears to belong to this genus as defined by Saccardo,* who credits the name to Greville.† Fries,‡ however, was the original author of the genus and until it is revised its exact application cannot be determined.

BOTHRODISCUS § gen. nov.

Pycnidia in the form of regular cavities in a black, discoid, coriaceous, or subcorneus, substipitate stroma which has a peridium about the margin; spores elongate, hyaline or pale lemon-colored, continuous.

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* SACCARDO, P. A. Syll. Fung. 3: 277. 1884.

† GREVILLE, R. K. Scott. Crypt. Fl. 5: 253. 1827.

‡ FRIES, E. M. Syst. Orb. Veg. 119. 1825.

§ Bothros = pit, and discos = disk.

This genus should apparently be placed in the order *Sphaeropsidales* of the *Deuteromycetes.* It appears to be related to *Fückelia*, but differs in having the stroma furnished with a peridium which covers its upper part and ruptures at maturity, remaining as a spreading cup about the margin of the stroma. Its cavities are regular in shape and each has its own apical opening. The type of the genus is *B. pinicola.*

Bothrodiscus pinicola sp. nov.

Stroma dark-colored, obconic, substipitate, arising from the inner bark; disk black, areolate, 0.5–1 mm. in diameter, covered at first by a thin coriaceous peridium which ruptures at maturity and spreads in the form of a cup; pycnidia consisting of numerous, regular cavities, about 75 μ in diameter and 100 μ deep in the disk of the stroma, covered with a black layer at the top which ruptures irregularly; spores hyaline or faint greenish-yellow in mass, clavate-cylindric, more or less curved, multi-guttulate, continuous, 32–42 x 5–6 μ. When the stroma is pressed the spores, attached at their bases, are expelled in a globular mass.

Type, *no. 1475* C. L. S., on dead branches of *Pinus virginiana* collected by Mrs. T. A. Williams, Takoma Park, D. C., May, 1899.

Anthostomella destruens sp. nov.

Perithecia gregarious, submembranous, globose or subpyriform, 350–450 μ diam. usually somewhat contracted above into a short broad neck, ostiolate; asci 8-spored, cylindrical, subsessile 200–232 x 15–18 μ; paraphyses none; spores short elliptic, sometimes somewhat inequilateral, uniseriate, hyaline at first, changing to yellowish-brown, and at maturity a deep dark brown, almost opaque, 16–24 x 10.5–12 μ.

Type, slide *no. 1491* from pure culture *no. 450* on cornmeal, isolated from a diseased cranberry from New Jersey. This is not a typical *Anthostomella*, as paraphyses are wanting. It appears to be rather closely related to *A. Smilacis* H. Fab., but has much longer asci and larger different-shaped spores. Pure cultures grown from spores have produced no other spore form.

ACANTHORHYNCHUS * gen. nov.

Perithecia submembranous, scattered, buried, beaked; beak spiny, ostiolate; asci 8-spored, paraphysate; spores continuous, brownish-yellow.

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* Acanthos = thorn, and rhynchos = beak, suggested by the spiny beak.

Type, *A. Vaccinii.*

Acanthorhynchus Vaccinii sp. nov.

Perithecia amphigenous, scattered, subglobose, or somewhat flask-shaped, submembranous, buried, scarcely erumpent, 120–200 μ diam.; neck stout, exserted, ostiolate, ⅓ to ½ length the perithecium, beset with black, nonseptate spines, 50–70 × 8–9 μ at base; asci subelliptical or somewhat clavate, subsessile, 8-spored, having an apical pore, 120–155 × 24–44 μ; paraphyses septate, exceeding the asci; spores oblong-elliptic, continuous, pale brownish-yellow, surrounded by a mucilaginous layer of protoplasm, 24–32 × 12–18 μ.

Type, *no. 1493* C. L. S., on leaves of *Vaccinium macrocarpum*, West Mills, New Jersey, September, 1901. Specimens also examined from Nova Scotia, Massachusetts and West Virginia; also obtained in cultures from Wisconsin cranberries.

This genus is apparently nearly related to *Sordaria* and *Hypocopra* as treated by recent authors; the spores are forcibly discharged at maturity, and upon germination produce dark-brown crenate-lobed disk-shaped appressoria 50–100 μ in diameter. These can frequently be found attached to the surface of cranberry leaves into which they send germ-tubes. The protoplasm about the spores in the ascus extends to the apex and seems attached there in a manner somewhat similar to that described in *Hypocopra* by Griffiths and others. The form of the protoplasm suggests a secondary internal ascus-membrane, but this has not been demonstrated.

Glomerella rufomaculans Vaccinii var. nov.

Conidia. — Acervuli amphigenous, small, scattered, on a light-brownish, more or less indefinite spot; conidia forming gelatinous, pale-pinkish masses, oblong-cylindric or sub-clavate and sometimes slightly curved, 12–18 × 4.5–6 μ, guttulate, contents granular; sporophores simple, slightly tapering above, about twice the length of the conidia; setae rarely present.

Perithecia. — Perithecia scattered, gregarious or cespitose in cultures and more or less buried in a dark-brown, felt-like subiculum or pseudostroma, dark-brown or nearly black, submembranous, subglobose, slightly rostrate, ostiolate; asci 8-spored, oblong to clavate-cylindric, subsessile or short-stipitate, 60–72 × 10–12 μ, paraphyses fugacious; spores irregularly sub-biseriate, oblong-elliptic, hyaline or faintly yellowish-brown when mature, finely granular and having a light spot at the center, 9–18 × 5–7.5 μ.

Type, slide *no. 1447A* C. L. S., showing both conidia and perithecia, from a pure culture (*A*) made from an ascospore. Original material from which this ascospore was grown was from leaves of *Vaccinium macrocarpum* from New Jersey. The ascogenous form has not yet been found on the cranberry plant. The conidial stage has also been found on leaves and berries from Massachusetts. The fungus in both stages has been isolated from berries from New Jersey and Wisconsin.

This fungus shows no sufficiently constant morphological characters to separate it specifically from the plant found on the apple or the one on the grape. Whether it should be regarded as the same plant which occurs on the grape or apple depends on the possibility of its infecting those hosts. The efforts we have thus far made have been unsuccessful, but are not regarded as conclusive. There occur occasionally in young perithecia filaments about the mass of asci which have been regarded as paraphyses. Their inconstant character, however, renders them of little value for taxonomic purposes.

There is without much doubt an older name which should be applied to this genus, but until we have more certain knowledge of the type the name *Glomerella* may be used.

Gloeosporium minus sp. nov.

Acervuli amphigenous, small, scattered, not on a definite spot, when occurring on fruit the epidermis is dark-colored above and about them; conidia forming pale-pinkish, glutinous masses, oblong-elliptical or subcylindric, sometimes inequilateral or somewhat clavate, usually guttulate when fresh, 6–9 × 3–4 μ; sporophores simple, slightly tapering above, 1½–2 times the length of the conidia; no setae observed.

Type, *no. 1494*, on fruit of cranberry, *Vaccinium macrocarpum*, from the market, Washington, D. C., April, 1902, C. L. S.; also on cranberry leaves from New Jersey and isolated from leaves from the same state.

This has been grown in pure cultures for a long time, but no ascogenous form has been obtained. It agrees in general characters with the conidial form of *Glomerella rufomaculans Vaccinii* Shear, but the conidia are constantly smaller, being only half as long, and we have been unable to find any indication of intergradation in this respect.

Guignardia Vaccinii sp. nov.

Pycnidia. Pycnidia, rather thickly and evenly distributed over the surface of affected leaves, usually hypophyllous, 100–120 µ diameter, globose or depressed-globose, buried at first, finally somewhat erumpent, with the apex and short or nearly obsolete ostiolum breaking through the epidermis; pycnospores 10.5–13.5 × 5–6 µ, smooth, hyaline, or amber-colored when fully mature and in mass, obovate and usually somewhat flattened at the apex, bearing a somewhat inconspicuous, granulate-mucilaginous curved appendage averaging about three fourths the length of the spore; sporophores 10–15 µ long.

Perithecia. Perithecia practically identical in size, shape, texture and mode of growth, with the pycnidia; asci 8-spored, clavate-cylindric, usually short-stipitate, non-paraphysate, 60–80 × 9–12 µ; spores smooth, hyaline, or when fully mature pale greenish-yellow, elliptical or subrhomboid and somewhat inequilateral, 13.5–16.5 × 6.5–7 µ.

Type, *no. 1476* C. L. S., on leaves of *Vaccinium macrocarpum*, near Lakewood, New Jersey, September 4, 1904. We also have specimens from Morgantown, West Virginia; Wareham, Massachusetts; Arichat, Nova Scotia; and Grand Rapids, Wisconsin.

This fungus was described and figured without a name by Dr. B. D. Halsted in Bull. N. J. Agr. Exp. Sta. 64: 33–35. 1889. The figure of ascospores given by Dr. Halsted does not correspond exactly with our specimens, but the plant represented is probably the same. The plant has also been described and figured by the writer, but without specific name, in U. S. Dep. Agric. Farm. Bull. 221: 6. *f.* 1–4. 1905.

This species is closely related to *Guignardia Bidwellii* (Ell.) Viala & Rav.

It causes a serious disease of the cultivated cranberry, generally called "scald" by growers. It attacks the berries when they are very small, causing them to shrivel up, turn black and become covered with pycnidia; when half-grown or more the fruit becomes very soft and watery. The connection between the pycnidial and ascogenous forms has been demonstrated by numerous pure cultures from the mycelium and ascospores. A detailed account of the life history of this fungus will be published later.

Ustilago Claytoniae sp. nov.

Sori in ovaries, protected by the calyx of the host, ovate, flattened, 2–3 mm. long, forming a dark wine-colored or purplish mass; spores purplish, mostly spherical or subspherical, 11–16 μ in diameter with prominent winged reticulations 1–2 μ wide by 2.5 μ deep.

Type collected by Col. T. E. Wilcox, Vancouver Barracks, Washington State, April 8, 1903, on *Claytonia linearis* Dougl. (*Montia linearis* (Dougl.) Greene). Specimen in herbarium of National Museum and also in herbarium of the Department of Agriculture. This species appears to be related to *Ustilago Calandriniae* Clint.

Sorosporium Montiae Rostr. (1896), found on leaves and stems of *Montia minor* in Denmark, is apparently quite different from our species.

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